

Patent Claims

1. Device for the thermal tempering of at least parts of the cross section over the lengthwise extension of sequentially produced profiled rolling stock from the rolling heat, in particular for hardening at least the head of rails having a length of greater than 50 m, and subsequent cooling to room temperature, consisting essentially of a roller table, a means for axially aligning the rolling stock, a transport means having a rest for the rolling stock for transporting the same in transverse direction, a hardening device with a manipulator arrangement, and a cooling bed, characterized in that the roller table (1) has a device for positioning in longitudinal direction the rolling stock (S) which is supplied thereto supported in at least one cross-sectional region, and an assigned alignment means (2), in that the hardening device (3) is formed of at least two liquid cooling devices (31, 32), arranged next to one another essentially parallel to the alignment means, with manipulators (311, 331) for a movement of the rolling stock (S), in that the deposit region (41) of the cooling bed (4) is located next to, and parallel to the lengthwise extension of, the liquid cooling devices, and in that the means (5) for transport in transverse direction has at least two supporting arms (51) that are simultaneously movable between the rolls of the roller table, each arm having end-side rolling stock rests (52) arranged thereon, these rests on the supporting arms are movable in the transverse direction from the alignment position in the region of the roller table (1) into the deposit region (41) of the cooling bed (4) and can be raised in such a way that exclusively the rests protrude beyond the transport surface (11) of the roller table (1).
2. Device according to claim 1, characterized in that it is intended for a rolling stock (S)

in the form of a running rail or railroad rail that is supported on the roller table (1) in two cross-sectional regions, in that the positioning device is embodied as an electronically controllable means, and/or has an alignment bar (21) or a stop.

5 3. Device according to claim 1 or 2, characterized in that the liquid cooling devices (31, 32) are embodied as submersion basins (312, 322) that have horizontally aligned stops (313, 323) which act on the bottom and, optionally, laterally for leveling the rolling stock (S).

10 4. Device according to claims 1 to 3, characterized in that manipulators (311, 321) are assigned to each submersion basin (312, 322), by means of which the rolling stock (S), in particular a rail, can be taken off the rests (52) of the means (5) for transport in transverse direction, introduced, alignable vertically, "head down", into the submersion basin (312, 322), and placed on the rests (52) again.

15 5. Device according to one of claims 1 to 4, characterized in that holding-down means (314, 324) are provided for the rolling stock (S), in particular a rail, with which means the rolling stock / rail (S) can be pressed down against the leveling stops (313, 323) in the submersion basin (312, 322) during cooling.

20 6. Use of the device according to one of claims 1 to 5 for hardening at least the head of rails with a length of greater than 50 m and subsequent cooling to room temperature at a pass-through time of a rail through the hardening device that exceeds the supply frequency.

25